



# Fisheries Management Plan



Saskatchewan  
Ministry of  
Environment



## Vision

Healthy, sustainable fish populations and habitat that provide diverse benefits for Saskatchewan.

# Fisheries Management Plan

## Overview

Saskatchewan enjoys an abundance of lakes and streams, with an estimated 50,000 waters that contain fish. The majority of fish-bearing waters are located in the northern half of the province, while the most productive waters are contained within the south. Saskatchewan has 69 species of fish, 58 of which are native to the province and 11 that have been introduced or have invaded. Saskatchewan's fishery provides diverse opportunities for the province's residents and visitors. Most of the fishing effort and harvest is focused on five species: pike; walleye; perch; lake trout; and whitefish.

Saskatchewan's fishery resource is an important contributor to the well-being of the province's residents. The Ministry of Environment recognizes this importance and initiated a review of the fishery to examine the many factors that have influenced and continue to shape the fishery, as we know it today. Over the past three years, the ministry has sought the input of the public, First Nations and Métis, stakeholders, businesses and organizations across the province on fisheries management.

This document provides a framework for maintaining and building upon the significant values and benefits of Saskatchewan's fishery and forms the basis for ensuring the fishery continues to be enjoyed by current and future generations. The plan covers all areas of fisheries management for which the Ministry of Environment has statutory control.

| Outcomes                                                                                                                                                        | Objectives                                                                                                               | Key Challenges                                                                                                                                                                                                                                                                                                                                                     | Performance Indicators                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Sustainable Management</b><br>                                           | 1. Maintain Productive Capacity                                                                                          | Minimizing the effects of human activities and developments on aquatic habitats while promoting economic growth.                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>► Fish populations that meet sustainable management objectives and targets for managed fisheries.</li> <li>► Stable or increasing catch rates for angling and commercial fisheries.</li> <li>► Net benefits from enhancement maintained while reducing the number of fish population and habitat restoration projects required.</li> <li>► A monitoring and assessment program, and predictive modeling tools, that provide timely, science-based information to fisheries management decision making.</li> </ul> |
|                                                                                                                                                                 | 2. Manage Harvest to Match Sustainable Supply                                                                            | <p>Managing fisheries in a sustainable manner with incomplete information on fisheries productivity, fish populations and harvest for many waters.</p> <p>Regulating the harvest within sustainable limits in a manner that meets multiple interests and values.</p> <p>Prioritizing enhancement activities to improve productivity and opportunities to fish.</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>2. Protect and Accommodate the Treaty and Aboriginal Right to Fish</b><br> | 1. Acknowledge and Recognize the importance of Treaty and Aboriginal Rights in Fisheries Management Policy and Practices | Ensuring Treaty and Aboriginal rights to fish are met, with limited knowledge of their use, and with increasing demands from other users.                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>► Increased partnerships and collaborative agreements in place.</li> <li>► Improved information sharing, understanding of Aboriginal use and incorporation of Aboriginal knowledge into fisheries management.</li> </ul>                                                                                                                                                                                                                                                                                          |
|                                                                                                                                                                 | 2. Encourage and Support the Involvement of First Nations and Métis Communities in Fisheries Management                  | Establishing mutually acceptable two way communication and consultation processes that promote increased involvement of First Nations and Métis in fisheries management decisions.                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>3. Allocation to Optimize Social and Economic Benefits</b><br>            | 1. Maintain Public Access                                                                                                | Providing fair and equitable licensing of opportunities.                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>► Level of participation in fisheries resource use maintained and user (ie. sustenance fishers, anglers, commercial fishers, outfitters) satisfaction increased.</li> <li>► Economic benefits from sport and commercial fisheries maintained or increased.</li> <li>► Licence fees that are competitive with other jurisdictions.</li> </ul>                                                                                                                                                                      |
|                                                                                                                                                                 | 2. Recognize Multiple Use                                                                                                | Creating a balanced approach to multiple use that is supported by science, allocates available opportunities in an equitable manner, and meets the often competing demands of fishery resource users.                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                                                                                                 | 3. Promote and Develop Opportunities                                                                                     | Finding new opportunities to increase social and economic benefits while honoring the principles of conservation, sustainable harvest and the legal obligations to Treaty and Aboriginal users.                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>4. Shared Responsibility and Public Engagement</b><br>                    | 1. Informed Users                                                                                                        | Enhancing public knowledge and promoting personal stewardship of the fisheries resource.                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>► Improved rate of compliance with fisheries regulations.</li> <li>► Increased public knowledge of fisheries management principles and practice.</li> <li>► Increased opportunities for stakeholder participation in fisheries management and stewardship activities and reduced conflict.</li> </ul>                                                                                                                                                                                                             |
|                                                                                                                                                                 | 2. Public Participation and Community Involvement                                                                        | Developing effective communications processes and mechanisms to address conflict.                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

# Plan Development

The last provincial fisheries plan was implemented in the early 1990s and does not provide the necessary means to address emerging pressures on the fishery resource. Emerging pressures include: climate change; increasing access to the resource; the development of new technologies to harvest fish; and increased competition among users. The ministry wanted to engage all user groups to determine how to best manage the provincial fishery over the next decade.

The duty to consult with First Nations and Métis on the proposed provincial fisheries management plan has been recognized and incorporated into planning activities since the earliest stages of the planning process in 2006. A number of activities were used to involve First Nations and Métis in plan development: providing information; personal contacts; bilateral discussions and forums; roundtable discussion with multiple interests; and opportunity to review and comment on a draft plan.

From October 2006 to February 2007, the Ministry of Environment conducted 25 public open houses across the province to collect input on fisheries management in Saskatchewan. More than 400 people attended the open houses and provided over 1,600 comments about the provincial fishery.

Ministry staff used these and other comments and suggestions to help prepare discussion documents on the key challenges to be addressed during a roundtable discussion process. Seven roundtable forums were held in 2007/08 to provide consensus recommendations for consideration in the provincial fisheries management plan. The following groups participated in these discussions: Federation of Saskatchewan Indian Nations; Métis Nation Saskatchewan; Saskatchewan Wildlife Federation; Saskatchewan Outfitters Association; Saskatchewan Cooperative Fisheries Ltd.; South Saskatchewan Wildlife Association; Southern Commercial Fishers; Walleye Trail; Fishing for Tomorrow Foundation; Saskatchewan Flyfishers; Tourism Saskatchewan; and the Provincial Parks Advisory Committee.

In July 2009, a draft plan was released for public review and comment. All comments received were given careful consideration when finalizing this plan.

## Plan Principles

***Make decisions based on best available scientific knowledge, ecological principles and traditional ecological knowledge.***

### **What does this mean?**

The ministry is committed to using the best available scientific evidence and traditional ecological knowledge to inform its decisions. Ecology is the study of the distribution and abundance of organisms and their interactions with each other and their environment. The principles of ecology, such as adaptation and predator/prey relationships, underpin the science used when making fisheries management decisions.

Traditional ecological knowledge refers to an evolving knowledge about interactions and relationships between living beings and the natural world that has been developed over generations of observations. This knowledge base can parallel and complement the discipline of ecology and add to the understanding of plants, animals and natural phenomena and can enhance the development and management of natural resources such as hunting, fishing, trapping, agriculture, mining and forestry. The identification and application of traditional ecological knowledge requires the participation and approval of First Nations and Métis communities.

***Ensure Treaty and Aboriginal rights are recognized and respected.***

### **What does this mean?**

First Nations' Treaty rights and Métis Aboriginal rights to fish, trap and hunt are recognized and protected by Section 35 of The Constitution Act, 1982. These rights are given priority over all other uses. Only valid conservation or other justifiable concerns can supercede these rights. Governments have a legal duty to consult with First Nations and Métis communities on matters that may impact the ability to exercise those rights.

***Maintain ecosystem health.***

### **What does this mean?**

For Saskatchewan to continue to benefit from its fishery resources, the environment must be fit and healthy for fish and the organisms upon which they depend. Every species of fish in an aquatic community plays an important role in the overall healthy function of the ecosystem. The diversity of a fish community is closely related to the variety and health of habitat. The entire community of organisms in the aquatic ecosystem is important to ensure that fish populations continue to thrive for future generations. Fisheries management strategies will consider the fish community and aquatic ecosystem in its entirety.

***Focus on the long term and consider broader implications.***

**What does this mean?**

Policies, legislation and management actions should focus on the long-term conservation and sustainable use of fishery resources. Conservation and management measures, whether at the local, watershed, management zone or provincial level, will be designed to ensure the long-term sustainability of fishery resources and to maintain the quality, diversity and availability of fishery resources in sufficient quantities for present and future generations. Short-term considerations should not compromise these objectives.

***Use precautionary, adaptive management approaches to fisheries management.***

**What does this mean?**

Adaptive management responds to uncertainty by implementing decisions based on best available information, monitoring outcomes effectively and adjusting thinking and actions based on a thoughtful analysis of experience. This approach provides a formal and consistent means of evaluating management alternatives and ensures uncertainties are explicitly described and evaluated during the decision-making process.

***Provide opportunity for open and meaningful involvement of stakeholders to promote shared stewardship.***

**What does this mean?**

Effective fisheries management needs to consider and understand the impact of decisions on the people involved. Opportunity exists to provide factual information about fisheries management principles and science and how each of us can do our part to use the resource wisely and in a sustainable manner. Public awareness and engagement in fisheries management are essential to sustaining aquatic habitats and fish populations. The privilege or right to fish carries with it the obligation to do so in a responsible manner to ensure effective conservation and management of fishery resources.

***Provide optimal, sustainable benefits for all Saskatchewan.***

**What does this mean?**

Saskatchewan residents all have a stake and share in the use of the province's fishery resource. A variety of experiences need to be offered that meet Saskatchewan residents' preferences, including food and non-food uses. The preferred combination of the various uses will maintain ecosystem health and long-term economic benefits to Saskatchewan. Understanding and respect for different economic, cultural, heritage and social views, values, traditions and aspirations concerning the fishery resource will be promoted.

***Maintain public access to the fishery.***

**What does this mean?**

Saskatchewan and other North American jurisdictions have a history of providing reasonable opportunity to fish to the public. This tradition of public ownership and access will be maintained.

***Provide clear, understandable and effective fisheries management.***

**What does this mean?**

Effective fisheries management includes clear objectives, actions to achieve these objectives and monitoring programs that assess if objectives are being met. The information relevant to these three processes must be widely available to establish confidence in strategies and ensure transparency in decision-making. A transparent process ensures that management objectives are evaluated from biological, ecological, economic, social and political perspectives.

***Promote regulatory compliance through education, verification and enforcement.***

**What does this mean?**

The Ministry of Environment strives to achieve high levels of voluntary compliance by setting clear requirements, educating client groups on those requirements and their rationale and monitoring whether or not they are being followed. An important element of harvest monitoring is to check for user compliance with legislation and to enforce the legislation in non-compliance situations.

## **Outcomes**

To achieve the vision stated above, four outcomes have been identified that encompass the key elements of the management plan and help align our policies and delivery efforts.

1. Sustainable Management
2. Protect and Accommodate the Treaty and Aboriginal Right to Fish
3. Allocation to Optimize Social and Economic Benefits
4. Shared Responsibility and Public Engagement

## **Performance Indicators**

Effective fisheries management programs depend on our ability to communicate program success and progress through appropriate quantitative and qualitative measures or indicators. There must be a linkage between the management plan outcomes and measures appropriate to those outcomes.

In some cases, the **actions** we need to take to achieve these outcomes are specific and are detailed in each section. In other cases, the course of action appears as a **management approach** to guide future decisions and policies.

Each outcome has a list of performance indicators that will be used to determine how successful we are in achieving the outcomes and help to determine future improvements to management.

## Introduction

Fish, although renewable, are not infinite and fisheries need to be managed properly if their contribution to the economic and social well-being of Saskatchewan people is to be sustained. Each fish captured or harvested should provide benefits while minimizing harm to the environment and to the ability of the fish population to replenish itself. Saskatchewan must demonstrate that ongoing and proposed use of the provincial fishery will not impair its ability to provide continued benefits in the future.

Sustainability requires balancing ecological, social and economic interests in decision-making.

- Ecological considerations: strive to maintain individual stocks and species at levels that maintain or enhance the capacity and quality of the ecosystem.
- Social considerations: strive to maintain or enhance the welfare of participating and affected communities and individuals.
- Economic considerations: strive to maintain overall viability within local and provincial economies by generating sustainable economic benefits.

Fisheries are sustainable if the aquatic ecosystems (including their structures, functions and services, such as recreational or commercial fishery) persist in the long term. Sustainable management of inland fisheries conserves fish populations and diversity, maintains water quality and ecosystem health, uses sound management, is economically viable and is socially acceptable.

## Objective 1: Maintain Productive Capacity

Ecosystems vary in complexity and each layer of complexity reduces the predictability of the interactions. Aquatic habitats and their sustainability for fish are shaped by many factors including: the physical structure of the environment; its chemical and water-related properties; and the biological organisms that reside there. Watershed level and site-specific characteristics interact to influence the structure, composition and function of aquatic ecosystems. Understanding these characteristics and having the ability to measure the productivity and health of an ecosystem is fundamental to the management of biological resources.

**Key Challenge:** *Appropriate planning and actions are required to lessen the future potential effects of environmental threats.*

Environmental threats may result in both dramatic and subtle changes to aquatic ecosystems. These disturbances and their initial effects may be subtle, local and difficult to detect, yet their long-term influence may be profound and extensive. Change in physical and chemical features of the environment (e.g. temperature, wind, pH levels) may cause change to the composition of species assemblages and to ecosystem function. In addition to their individual effects, such environmental changes may have cumulative effects on aquatic ecosystems because they interact in complex ways.

Environmental threats of particular relevance to Saskatchewan's fishery include climate change, acid rain, invasive species and disease. Each of these threats has the potential to impact Saskatchewan's fishery; however, their combined effects could be considerable.

**Action:** Expand the collection of baseline data to monitor and assess changes to aquatic ecosystems from environmental threats.

**Action:** Complete literature review to assess the vulnerability of Saskatchewan's aquatic species to climate change.

**Action:** Prepare a strategy to address the potential impacts of climate change to Saskatchewan's fishery.



## Outcome 1

Sustainable Management

**Action:** Monitor the acidity of precipitation and receiving waters and work with industry to develop means to lessen the risks of lake acidification.

**Action:** Strengthen provincial legislation to prevent the occurrence and control the spread of harmful diseases and invasive species.

**Action:** Partner with the Canadian Food Inspection Agency and Fisheries and Oceans Canada to develop and implement the National Aquatic Animal Health Program.

**Key Challenge:** *Incorporating fishery productivity and habitat considerations into water management planning and operations.*

Land drainage, irrigation and hydroelectricity production can impact aquatic ecosystems through habitat modifications, impede fish migration to spawning grounds and alter freshwater flows. These impacts can reduce the number of fish in rivers and lakes downstream of the activity.

**Action:** Participate in, and provide fisheries management expertise to, watershed planning and other water management planning and policy development.

**Action:** Participate on inter-agency working committees intended to address fisheries issues related to hydro-development operations.

**Action:** Partner with other agencies to develop indicators of aquatic animal health and function.

**Key Challenge:** *Minimizing the effects of human activities and developments on aquatic habitats while promoting economic development and growth.*

Human activities can reduce the ability of waters to support productive fish populations through their cumulative effects on water quality and aquatic habitats.

Many of the drivers of the provincial economy and activities that maintain our living standard and quality of life may affect aquatic habitats. Industrial activities, urban and recreational developments, roads, dams and agricultural land uses and developments have the potential to affect Saskatchewan's aquatic habitats and fisheries.

Due to increasing industrial activity in northern Saskatchewan, the number of roads and trails providing access to remote waters is increasing. These roads and trails, if not constructed properly, can have detrimental impacts on fish habitat by creating erosion and other habitat degradation. Silt build-up in critical habitat can ruin spawning areas.

Commercial and residential development of lakeshores may cause increased nutrient loading, increased invasion rate of non-native species and alteration of shoreline habitats.

**Management Approach:**

- A balanced approach to economic development and environmental protection will be taken. Appropriate environmental considerations and safeguards will be a part of all development proposals and plans. Particular attention will be applied to the sensitive ecosystems of northern Saskatchewan.
- After approval of any development, the necessary compliance activity will be undertaken to ensure appropriate environmental regulations, standards and guidelines are followed.
- The ministry will provide staff capacity and competencies required to ensure appropriate environmental protection oversight for activities and developments.

**Action:** Develop standards that guide developments affecting aquatic habitats for incorporation into the Saskatchewan Environmental Code.

**Key Challenge:** *Lack of clear direction and guidelines for fisheries enhancement programs and activities.*

With the establishment of the Fish Enhancement Fund in 1984 (now the fisheries component of the Fish and Wildlife Development Fund), opportunities to enhance aquatic habitat became available through increased monies and designated staff. Thirty per cent of the price of each angler's licence is deposited into the Fish and Wildlife Development Fund (FWDF) to be used to improve fish habitat and carry out other fisheries management activities. Habitat enhancement activities have included: installation of aeration systems; construction of spawning reefs for walleye and trout; stream enhancement; and the creation of trout ponds, fish-rearing ponds and spawning marshes.

Projects to enhance and diversify fishing opportunities in Saskatchewan have been done on an ad hoc basis, as ideas and interests were generated from resource users and within government.

**Management Approach:**

The FWDF will place spending priority on projects that benefit anglers, who are the primary contributors to the fund.

The FWDF will focus on the following list of fisheries activities:

- habitat enhancement projects;
- species at risk projects;
- research, data collection and inventory;
- education;
- student bursaries for fisheries research;
- support for First Nations and Métis projects;
- stocking and fish population enhancement; and
- waterbody accessibility and user facilities.

Projects and activities should be considered and completed cost-effectively.

**Action:** Develop and implement a fisheries enhancement plan in partnership with resource users, which provides direction for the future, identifies priorities, explores options to increase revenues and contains a process for monitoring and evaluating program effectiveness.

**Action:** Implement regular and ongoing program evaluation of the FWDF. Criteria to be considered in the evaluation will include: benefits to the resource; benefits to the users; cost effectiveness; and safety considerations.

## Objective 2: Manage Harvest to Match Sustainable Supply

Fisheries management strives to maximize the value of fish harvested within sustainable limits. Sustainable use of fishery resources is achievable when humans use fish populations in ways that allow natural processes to replace what is used.

**Key Challenge:** *Managing fisheries in a sustainable manner with limited information on the productive capacity and state of fish stocks for many Saskatchewan water bodies.*

Knowledge of the productive potential of the water, suitability of its habitats, the status of its fish populations and factors affecting reproduction and mortality is important to fisheries management. Fisheries biologists seek to link data gathered from water body studies, fish population data and harvest data to provide information for fisheries management. Fishery productivity is defined as the fish carrying capacity of a water body and its capacity to provide a sustainable fish harvest. Given the complexity and unpredictable nature of ecosystems, it is necessary to concentrate on measuring a few fundamental components. These indicators must be measurable with the technology that is available at the time.

The number of fish added to populations may vary considerably from year to year, resulting in an uneven distribution of age groups. The factors influencing this include seasonal effects of water temperature, water levels during critical life stages and the availability of spawning surfaces. For example, high, stable water levels in spring that flood vegetation may result in improved numbers of pike from that year.

With tens of thousands of waters, many in remote areas, there is a high cost to collecting productivity information for all fish-bearing waters in Saskatchewan. Specific issues related to the fishery resource largely drive fisheries assessment priorities.

**Management Approach:**

The ministry will use the following elements when conducting assessments of lake productivity and fisheries:

- best practices, good science and traditional ecological knowledge;
- adequate resources for field study and subsequent analysis and reporting;
- partnerships with, and assistance from, other groups, agencies and volunteers wherever possible (e.g. universities, technical schools, conservation organizations, First Nations, Métis, industry, anglers, etc.); and
- efficient and understandable processes and procedures for involving the public in monitoring and assessment programs.

Policies and legislation will reflect the results of monitoring and assessments.

**Action:** Review, evaluate and adapt fisheries productivity models for use in Saskatchewan.

**Action:** Develop standard procedures for prioritizing fisheries field assessments based on the importance of the fishery and sustainability issues.

**Action:** Review and refine standardized, science-based protocols for field data collection and reporting.

**Key Challenge:** *Managing species and size selective harvest to minimize negative impacts to fish communities.*

Changes in the abundance of top predators can change the entire aquatic community structure. When the abundance of predators is reduced, there is a greater chance that forage species may increase in number and limit the abundance of the predator through competition with, or predation of, their young.

Mortality caused by fishing can be excessive for highly-valued fish species especially for the larger size classes. Such size selectivity can cause a higher percentage of younger and smaller fish in the population and may affect reproduction.

**Management Approach:**

- Encourage the harvest of smaller fish and underutilized species through education, regulation and other incentives when necessary.

**Action:** Monitor and watch for shifts in species abundance.

**Key Challenge:** *Defining level of sustainable harvest that meets multiple interests and changing environmental conditions.*

In a healthy fishery, there is an amount of fish that can be harvested each year while ensuring the fish population is able to sustain itself. This harvestable surplus is often expressed as the weight of fish harvested per unit area of lake per year (kg/ha/yr). Because fish reproductive success in a given year is variable, the harvestable surplus varies in response to changes in fish population abundance.

To manage a sustainable fishery, biologists strive to understand the current status of the fishery and then forecast this status into the future. There is considerable uncertainty about sustainable harvest limits, due to the complexity of aquatic ecosystems and changing environmental conditions. In addition, sustainable limits may vary depending on the type of fishery desired. Thus, fisheries biologists strive to set a stable but conservative harvest level that attempts to meet the needs of all users on any particular water.

**Management Approach:**

- Sustainable harvest will allow opportunity for differing fisheries management objectives based on rights, interests and demands on the fishery resource by users.

**Action:** Define population management objectives and develop specific targets and actions for individual waters, in consultation with users.

**Key Challenge:** *Collecting accurate, up-to-date harvest information to properly manage the fishery.*

Accurate harvest information is important to manage a sustainable fishery. Without this information, it is easy to exceed sustainable harvest levels, which can result in population collapse. Recovery of these populations may be slow to non-existent without significant and costly intervention.

**Action:** Conduct a provincial angler survey every five years as part of the cross-Canada angler survey.

**Action:** Investigate potential use of a web-based angler diary with incentives to promote angler participation and develop if shown to be cost-effective.

**Action:** Implement mandatory reporting of angler harvest and use by outfitters.

**Action:** Establish a web-based system to collect outfitter harvest information.

**Action:** Modify the commercial fishing information system to make data collection, entry, retrieval and analysis easier.

**Action:** Improve data collection and tracking of the bait fishery and the commercial harvest of aquatic invertebrates.

**Action:** Partner with First Nations and Métis to obtain up-to-date information on the Aboriginal sustenance harvest.

**Key Challenge:** *Regulating the harvest to ensure sustainability on both a broad scale and for individual waters.*

The ministry strives to have straightforward, easy to understand legislation that matches harvests to resource availability on a broad scale and for individual waters. Complex regulations detract from the fishing experience, are difficult to understand and comply with and do not necessarily improve fishing success. However, it is difficult to manage the province's several thousand fish-bearing waters and streams of all sizes, with vastly different productivity, species mix, ease of access and use, with one simple set of regulations. The number of water bodies with special regulations increases each year, despite efforts to keep regulations simple and straightforward.

Regulations serve a variety of purposes; however, the general objective is to limit the catch to biologically-safe levels. The overall fish harvest can be regulated by: limiting the numbers and size of fish that can be taken; limiting the times and places that can be fished; limiting the gear that can be used or by limiting the number of participants.

Angling demand on a particular water body is dependent on the quality of fishing, ease of access, harvest limitations and the availability of alternative fishing opportunities. Conservation measures applied to one water may cause anglers to shift to other waters with more liberal regulations.

**Management Approach:**

- Broad-based harvest regulations will be based upon fisheries management zones that consider differing ecological, social and economic characteristics.
- Special fisheries management zones or areas will be considered and implemented when warranted.
- In order to maximize opportunity, the ministry will consider the following order of priority when determining suitable harvest controls to manage the fishery:
  1. limits and specific area closures;
  2. seasons; and
  3. gear restrictions.

**Action:** Implement additional harvest controls for the sport fishery to alleviate specific harvest pressures across the province.

**Action:** Review the current three management zone structure to determine its effectiveness and whether changes are necessary.

**Key Challenge:** *Using fish stocking in a cost-effective manner that complements fisheries conservation and management objectives.*

Fish stocking is a management tool available to fisheries managers to create new fisheries, supplement or enhance existing fisheries with limited natural reproduction, or help recover degraded fisheries. It is a common misconception that stocking is the solution to depleted or collapsed fisheries, when in reality the effectiveness of a stocking program to rehabilitate these fisheries varies greatly. The success of fish stocking efforts is affected by many factors including: habitat suitability; productive capacity of the water body; the size and quantity of fish stocked; the presence of fish species that compete for food or prey on the stocked fish; and environmental factors that affect survival.

The supply of fish for stocking is limited by hatchery production, suitable spawning sources and overall costs. Stocking activities tend to be most successful in smaller southern waters with suitable habitat, but where fish are incapable of sustaining themselves due to limited natural reproduction. Studies have shown that most self-sustaining populations do not benefit from supplemental stocking and that stocking cannot be used to sustain a fishery above the productive capacity of its environment.

**Management Approach:**

- The ministry will focus stocking efforts on waters where benefits are significant and exceed costs. Stocking should be avoided for waters that are likely to have poor success due to frequent winterkill or other environmental and biological factors. Supplemental stocking of fisheries capable of reproducing naturally will be avoided.
- The ministry will continue to manage fish stocking in Saskatchewan in accordance with the National Code on Introductions and Transfers of Aquatic Organisms.

- The ministry will use the following order of priority to guide stocking in the province:
  1. enhance existing fisheries with limited or no natural reproduction, and recover populations of native species, including species at risk;
  2. establish new fisheries;
  3. provide urban angling opportunities; and
  4. provide put and take fisheries.

**Action:** Make informational materials available to the public on the role, use and limitations of fish stocking for fisheries management.

**Action:** Review and update the provincial stocking policy to ensure the stocking program continues to meet current and future fisheries management objectives.

**Key Challenge:** *Providing appropriate enforcement to achieve user compliance with legislation.*

Enforcement strategies must be firm, fair, consistent and timely to be effective, and are necessary to retain public confidence and support for fair, ethical and sustainable use of our natural resources and the environment.

Most individuals are willing to accept a limit on the number of fish they can harvest in return for an assurance this will protect the resource for future use. However, some may opportunistically engage in noncompliance if the potential for personal reward is high and the perceived risk of detection is low.

**Action:** Amend legislation to include mandatory suspensions of fishing privileges for certain conservation infractions.

**Action:** Provide adequate resources to ensure risk-based planning and compliance efforts focus on the greatest threats to the fishery.

**Action:** Review and rationalize special regulations to facilitate compliance while ensuring sustainable use.

**Key Challenge:** *Balancing demand for road and recreational development with the desire to maintain quality fishing and fish populations.*

Expansion of roads and trails for social and economic development purposes, combined with increasing demand for lakeside recreational developments may result in increasing harvest pressure on some lakes. Waters that were previously accessible only in the winter or by floatplane may now have year-round access, providing anglers and other resource users with opportunities to harvest fish from waters that had little previous use, or sustained a remote outfitting operation.

**Management Approach:**

- The ministry will take appropriate proactive fisheries management conservation measures when new road access or cabin development is planned.
- Land use plans will continue to consider existing fisheries, wilderness and traditional values.
- Some areas will remain unavailable to recreational developments to preserve and accommodate other values and interests.

**Action:** Collect up-to-date information about the effects of cottage development on fish harvest. This information will be used to help guide future recreational development on lakes.

## Performance Indicators for Outcome 1:

1. Fish populations that meet sustainable management objectives and targets for managed fisheries.
2. Stable or increasing catch rates for angling and commercial fisheries.
3. Net benefits from enhancement maintained while reducing the number of fish population and habitat restoration projects required.
4. A monitoring and assessment program, and predictive modeling tools, that provide timely, science-based information to fisheries management decision making.

## Introduction

First Nations Treaty and Métis Aboriginal rights have been recognized by the courts pursuant to Section 35 of The Constitution Act, 1982. As well, a number of court decisions have provided a legal framework for those rights. The ministry recognizes the paramourncy of those rights in fisheries allocation.

### Objective 1: Acknowledge and Recognize the Importance of Treaty and Aboriginal Rights in Fisheries Management Policy and Practice.

The province has a constitutional obligation to respect Treaty and Aboriginal rights, including rights to fish for sustenance purposes. Thus, a key component of fisheries management in Saskatchewan is to ensure that Treaty and Aboriginal rights to the fisheries resource are protected and accommodated, as required by law.

**Key Challenge:** *Ensuring the priority of First Nations and Métis rights to fish are met when determining allocations of the fishery to the broader community of resource users within the province.*

The province has an obligation to recognize the right to fish of both First Nations and Métis people and their communities. First Nations and Métis have expressed concern that the recognition of this obligation has not resulted in observable actions at the field level. First Nations and Métis are asking the ministry to identify the methodology used to protect their right to fish.

Métis desire greater clarification on their right to fish based on recent court decisions.

#### **Management Approach:**

- Use processes that provide greater transparency to First Nations and Métis on the protection of their rights.
- Ensure priority is given to Aboriginal and Treaty rights when developing and revising provincial fisheries policy.
- Align fisheries management actions with broader provincial government approach to First Nations and Métis rights.

**Action:** Partner with First Nations and Métis people to improve information on sustenance harvest and use.

**Key Challenge:** *Collecting and incorporating traditional ecological knowledge in fisheries management policy and practice.*

Many First Nations and Métis view the extraction of their traditional knowledge from its broader cultural context as inaccurate and may be reluctant to share the depth and breadth of what they know with outside interests. Their concern is that because many fisheries managers and decision-makers do not understand their culture, language, customs or values, their traditional knowledge may be misunderstood and used improperly.

**Action:** Work with local First Nations and Métis communities to use traditional ecological knowledge wherever possible in a manner that is respectful to the community.

## Outcome 2

Protect and Accommodate the Treaty and Aboriginal Right to Fish

## Objective 2: Encourage and Support the Involvement of First Nations and Métis Communities in Fisheries Management

The provincial fishery is an integral part of First Nations and Métis cultures and they want an active role in ensuring it is here for future generations.

**Key Challenge:** *Increasing First Nations and Métis involvement in fisheries management.*

First Nations and Métis want to be actively involved in management of the fishery beyond the actual effort of fishing. Some First Nations and Métis want to enter the resource management field and become conservation officers or fisheries biologists. They see this as one option to become more involved in fisheries management.

In addition, there was a desire to see youth participation in the fishery, so that one day they can pass their knowledge onto their children.

### **Management Approach:**

- Provide opportunity for First Nations and Métis participation in fisheries management programs and activities.

**Action:** Promote and establish collaborative partnerships and fisheries projects.

**Action:** Work with First Nations and Métis in support of their initiatives to conserve the fishery resource.

**Key Challenge:** *Develop mutually acceptable engagement mechanisms for effective two-way communication and consultations with First Nations and Métis communities.*

The province has a duty to consult with and accommodate, as appropriate, First Nations and Métis communities whenever it proposes to make a decision which could adversely affect the exercise of Aboriginal and Treaty rights. Successful consultation depends on clear, open and honest communications undertaken in a spirit of mutual respect and trust. The ministry is committed to working with First Nations and Métis to develop mutually respectful working relationships that will facilitate and support the involvement of First Nations and Métis people in the sustainable management of the province's fishery resource.

### **Management Approach**

- The ministry will work with First Nations and Métis to develop mutually respectful working relationships.

**Action:** Work with First Nations and Métis committees established to address fisheries management issues.

**Action:** Develop a communications strategy with First Nations and Métis to facilitate regular two-way sharing of information on the provincial fishery.

## Performance Indicators for Outcome 2:

1. Increased partnerships and collaborative agreements in place.
2. Improved information sharing, understanding of Aboriginal use and incorporation of Aboriginal knowledge into fisheries management.

## Introduction

A fundamental component of fisheries management is allocation, or "who gets what".

To ensure sustainability, only a portion of a fish population can be harvested. On some waters this potential harvest must be shared between different groups of resource users. Sharing the fish between users is complicated by two factors:

- 1) Although all users want to catch fish, the type of fish, the experience they desire, or the values they gain from doing so are often very different.
- 2) Fish are subject to the "rule of capture" whereby a resource user does not have ownership to individual fish until the fish are caught.

As the overall demand and the harvest increases, careful regulation of the harvest and explicit allocation of the available harvest becomes more important.

## Objective 1: Maintain Public Access

The fishery resource is considered held in public trust for the benefit of all. Saskatchewan has a history of providing public access to the resource.

**Key Challenge:** *A licensing system that provides equitable opportunity and fair return to the province.*

To ensure reasonable access to the fishery, Saskatchewan residents are provided the opportunity to purchase an angling licence at a modest price, which provides fishing opportunities on provincial Crown waters.

### Management Approach:

- Reduced fee licence options will be based upon the opportunity to fish (provided by the duration of a licence), rather than the number of fish allowed for harvest.
- Provide policy development and a regulatory environment that supports public access to fishing opportunities.

**Action:** Develop an angling licence structure with options based upon the opportunity to fish.

**Action:** Develop an automated licensing system to provide greater convenience to the angling public.

## Objective 2: Recognize Multiple Use

Multiple use of the fishery is a long-standing Saskatchewan tradition, and more than one user group harvests fish in many Saskatchewan waters. The goal has been to achieve a balanced sustainable harvest in all waters while providing a range of opportunities to fish.

Many larger waters in central and northern Saskatchewan are road accessible and experience multiple uses by sustenance users, recreational fishing, commercial fishing and outfitting.

### Management Approach:

Multiple use will be applied as an overall goal for managing the provincial fishery resource, but will not necessarily apply to each individual water body in the province. Allowed use(s) on any individual water body will depend on the following considerations:



- geographic location;
- historic uses;
- social and economic considerations;
- sustainable limits; and
- species of fish targeted.

**Key Challenge:** *Allocation of the fishery that meets the obligations to Treaty and Aboriginal rights and provides optimal social and economic benefits to the province.*

In Saskatchewan, as in most jurisdictions, the primary goal of fisheries management is to provide for optimal human use of the fishery resource while protecting and conserving the fish and their habitats for future generations. This goal of optimal use, combined with the constitutionally protected rights of First Nations and Métis people, is reflected in the priority for allocating the fishery resource.

**Management Approach:**

Allocation of fishery resource uses will be within sustainable limits, with resource conservation taking precedence before any allowed use.

The first priority for allocation of fishery resource uses will be to meet the Treaty and Aboriginal rights of First Nations and Métis.

Allocation of other opportunities to use the fishery resource will consider the history of use and socio-economic factors. Saskatchewan resident recreational and commercial uses will be given priority before Canadian resident recreational and non-resident recreational uses.

Should adjustments to the fishery resource use be required, the ministry will take into account the multiple users on the water and adjustments will reflect the management actions that are in the best interest of the fishery in question.

It is important to note that recreational use is not necessarily a consumptive allocation and commercial use of the resource is a privilege that Saskatchewan confers through licensing.

**Key Challenge:** *Balancing the harvest to meet competing interests and prevent conflict.*

There are differing views on the products desired from a fishery. Some recreational anglers want the opportunity to maximize their harvest, while others wish to have the opportunity to catch larger fish. Commercial net fishers desire maximum opportunity to harvest fish in order to maximize their economic returns. Depending on the nature of their operation, some outfitters wish to provide their clients the opportunity to catch and release an abundant supply of large fish.

As harvest approaches the maximum sustainable level in a fishery, fish populations generally become younger and smaller in size and subject to greater variability in abundance from year to year. Thus, users who desire the opportunity to catch a consistent supply of larger and older fish, must limit their overall harvest considerably. These differing interests can lead to conflict among the users of a fishery.

**Management Approach:**

- Effective, proactive communication and information sharing is important to increasing knowledge and understanding and preventing conflicts.
- The ministry will provide clear and understandable fisheries management options and consequences to fisheries users to help determine future management actions for a specific fishery.
- Provide opportunities for local involvement in fisheries management to promote greater understanding and collaboration among different users.

**Action:** Maintain the provincial Fisheries Advisory Committee to deal with matters of provincial scope.

### Objective 3: Promote and Develop Opportunities

Saskatchewan's commitment to the economic growth agenda reflects the desire for continued strong economic performance in a healthy environment. Government as a facilitator of development should ensure sustainable use of our fishery resource and support development of new opportunities.

**Key Challenge:** *Current methods for allocating to commercial users limits opportunity to others who wish to use the fishery.*

The fishery resource has been allocated traditionally on a first-come, first-served basis among the commercial users. The size of the allocation depends on the amount of resource requested and resource availability. The primary concern with such an allocation process is that the priority for allocation of commercial users is based upon short-term demand rather than long-term, optimal use of the resource for the water(s) in question.

Although most Saskatchewan waters with fish are considered to be fully allocated, many are not fully used. In some cases, allocations may be used sporadically or not at all. This prevents others from having access to the resource and limits the overall socio-economic benefits. The issue of underutilization is complicated by the practice of some commercial users to actively manage their use to obtain a harvest level below the theoretical limits estimated by fisheries managers. This is done typically to maintain a high quality fishing experience (i.e. large and/or abundant fish), or for other business reasons, which may actually increase the economic performance of the fishery. Changing economic conditions or personal circumstances are additional factors that contribute to underutilization of allocations.

Allocation to outfitters is often based upon the size of water, assumptions concerning camp occupancy (derived from surveys of outfitter use done during the 1970s and 80s) and legal angler limits. Waters designated as day-use were typically assigned limits to the number of angler-days that could be used.

**Management Approach:**

- Quotas based upon existing outfitter allocations will be provided as an allocation option for outfitting.
- Facilitate and promote communications and collaboration to address issues between commercial users.

**Action:** Develop a policy to address underutilized allocations.

**Key Challenge:** *Opportunities to increase the social and economic benefits from the fishery may exist, but have not been fully investigated or used.*

Saskatchewan wants to foster an environment that supports and encourages a healthy business community. A number of potential opportunities may exist to increase the economic and social benefits that Saskatchewan residents derive from the fishery, while maintaining the long-term sustainability of the resource.

**Management Approach:**

- The province supports initiatives to develop value-added processing and provide freer export marketing of commercial fish products as a means to increase the economic value of the commercial fishery.
- The province supports initiatives to develop aquaculture facilities in a sustainable manner.
- Fisheries management will support Saskatchewan's economic growth agenda in a sustainable manner.
- Fisheries management will support the promotion of provincial tourism initiatives that benefit the fishery.
- Business interests are best equipped to take the lead on identifying, developing and promoting economic opportunities related to the fishery resource in Saskatchewan. The role of the ministry will be:
  - to ensure sustainable use and provide fair and transparent allocation of opportunity;
  - to provide a regulatory environment that facilitates economic development; and
  - to be receptive to potential opportunities.

**Key Challenge:** *Providing a diversity of fishing opportunities to meet the interests of distinct users where biologically and ecologically feasible.*

Saskatchewan supports a full range of fishing opportunities. User preferences include fish species sought, type of gear used, type of access and fishing site characteristics. Planning for a diversity of fishing opportunities is not a simple task. In some cases one opportunity may influence or preclude another. When providing fishing opportunities the ministry must recognize the wide variation among users related to income, age, experience, ability and the kinds of opportunities sought. There are limitations to the total number of opportunities the province can support and care should be taken to evaluate the new opportunity in order to maintain ecosystem health.

**Management Approach:**

- The ministry will use population demographics information when managing the fishery and consider incentives to encourage youth participation.
- The ministry will manage select fisheries to provide trophy-quality fishing without restricting the type of angling allowed.

**Action:** Create detailed standards and best practices for competitive fishing events organizers to minimize event impacts on the fishery.

### Performance Indicators for Outcome 3:

1. Level of participation in fisheries resource use maintained and user (i.e. sustenance fishers, anglers, commercial fishers, outfitters) satisfaction increased.
2. Economic benefits from sport and commercial users maintained or increased.
3. Fisheries fees that are competitive with other jurisdictions.



## Outcome 4

Shared Responsibility and  
Public Engagement

## Introduction

Public interest for greater understanding and involvement in sustainable fisheries management is considerable. Many fishery resource users wish to be actively engaged in shaping the future of a sustainable fishery.

## Objective 1: Informed Users

Informed users understand their responsibilities and provide the support required for long-term sustainable fisheries management initiatives.

**Key Challenge:** *Enhancing public knowledge about fisheries management.*

Public awareness and understanding of fisheries management principles and practice is important to successful fisheries management.

### Management Approach:

- The provision of accurate and timely information on the fishery resource, its use, management and the conservation ethic will be a priority. A multi-pronged approach will be used involving partnerships where appropriate and may include the use of:
  - ▶ computer technology and provision of information on the ministry website;
  - ▶ instructional/informational videos;
  - ▶ Anglers' Guide;
  - ▶ outdoor education curriculum in schools;
  - ▶ media advertisements; and
  - ▶ volunteer groups.

**Action:** Create and implement a public information program on fisheries management using a variety of communications media.

**Action:** Develop an education and awareness program for aquatic invasive species and disease.

**Key Challenge:** *Promoting personal stewardship of the provincial fishery.*

Stewardship is a philosophy whereby each of us accepts responsibility to protect, conserve and prudently use aquatic ecosystems. Stewardship recognizes that our individual actions may have a number of consequences and that we have a responsibility to manage our behaviour appropriately.

Each user of the fishery resource needs to examine and limit their total ongoing impact on the fishery resource. For example, an angler who practices catch and release exclusively, targets a high demand species such as walleye, and fishes many times during the year may have considerably more impact on the resource than an angler who fishes only a few times per year, targets species in less demand and keeps everything he or she catches.

Fishery resource users can help the ministry by educating others, raising awareness of the provincial fishery and by participating in fisheries management initiatives.

**Action:** Collaborate with resource user groups to develop awareness and education programs aimed at promoting resource stewardship within the fisheries sector.

**Action:** Provide opportunities for public participation in hands-on fisheries management activities.

## Objective 2: Public Participation and Community Involvement

Public involvement in fisheries management includes providing input to fisheries management policies and programs as well as hands-on activities such as habitat restoration, fish enhancement and the collection of fisheries harvest information. This participation benefits fisheries management in two ways. First, it helps the ministry to achieve certain goals and collect scientific information that would otherwise be missing due to staffing constraints. Second, it fosters trust and understanding between the public and government.

**Key Challenge:** *The need for communication processes that are effective and efficient.*

Benefits arising from public involvement in the decision-making process may include: obtaining better information on the resource and its use; clarification of preferences and conflicts; increased acceptance of decisions; and increased public respect for an agency that invites their participation in the management of the resource. Constraints to the process include: the potential for confrontation; a more difficult and laborious decision-making process; increased staff and participant time commitment and training; and adequate funding to cover the costs associated with the process.

### **Management Approach:**

- The ministry will strive for regular, proactive consultation with fishery resource users.
- Opportunity will be provided for public involvement in fisheries management.
- Decision-making using mechanisms that are tailored to the issues and audience.

**Action:** Conduct a review of consultation processes used by other agencies to expand upon the consultation options available for fisheries management purposes.

**Key Challenge:** *Need to determine the best methods of effectively resolving conflicts that arise among the multiple users.*

Currently, the ministry handles resource conflicts by analyzing the wide variety of information surrounding the conflict. Every attempt is made to be fair and reach a consensus decision that is acceptable to all parties. Often a solution that meets everyone's demands may not be possible.

### **Management Approach:**

- Conflict resolution will remain the responsibility of the ministry; however, every resource user has a role to play in preventing and resolving conflict.
- Action to resolve conflict will be done in a timely manner.
- Lake and/or specific fishery conflicts are best resolved locally and by involving all affected stakeholders/users.
- Conflict resolution will strive for consistency in decisions and build upon past experience, while recognizing the need for flexibility and innovation when addressing specific issues.
- Conflict resolution will include the existing suite of approaches but consideration should be given to arms-length boards/committees in some situations.

**Action:** Conduct a review of conflict resolution processes used by other agencies to expand upon the options available for fisheries management purposes.

## Performance Indicators for Outcome 4:

1. **Improved rate of compliance with fisheries regulations.**
2. **Increased public knowledge of fisheries management principles and practice.**
3. **Increased opportunities for stakeholder participation in fisheries management and stewardship activities and reduced conflict.**

# Plan Implementation, Review and Evaluation

The ministry believes that the range of commitments in this document provide a coherent plan for safeguarding the long-term future of our provincial fishery.

This plan is treated as a 'living document' with ongoing processes for reviewing, evaluating and amending the plan as needed. Regular review of the progress in implementing the plan and its impact to the fishery will result in continual re-examination of and improvement to policies, procedures and legislation.

The Fisheries Advisory Committee will play an important role in plan implementation, review and evaluation through the provision of advice to the Ministry of Environment, communications to the broader public and ensuring accountability for plan implementation.

## **Management Approach:**

Regular review of plan implementation and progress reporting will be undertaken as follows:

- Annual progress review and reporting
- Five-year plan evaluation

**Action:** Prepare annual progress reports on plan implementation.

**Action:** Review and evaluate plan effectiveness every five years through a "State of the Fishery" reporting process.

# Action Delivery Timelines

| Action                                                                                                                                                                                                                                                                       | Short-Term<br>1-2 yrs | Mid-Term<br>3-4 yrs | Long-Term<br>5 yrs + |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|----------------------|
| 1. Expand the collection of baseline data to monitor and assess changes to aquatic ecosystems from environmental threats.                                                                                                                                                    | ONGOING               |                     |                      |
| 2. Complete literature review to assess the vulnerability of Saskatchewan's aquatic species to climate change.                                                                                                                                                               | ✓                     |                     |                      |
| 3. Prepare a strategy to address the potential impacts of climate change to Saskatchewan's fishery.                                                                                                                                                                          |                       |                     | ✓                    |
| 4. Monitor the acidity of precipitation and receiving waters and work with industry to develop means to lessen the risks of lake acidification.                                                                                                                              | ONGOING               |                     |                      |
| 5. Strengthen provincial legislation to prevent the occurrence and control the spread of harmful diseases and invasive species.                                                                                                                                              | ✓                     |                     |                      |
| 6. Partner with the Canadian Food Inspection Agency and Fisheries and Oceans Canada to develop and implement the National Aquatic Animal Health Program.                                                                                                                     |                       | ✓                   |                      |
| 7. Participate in, and provide fisheries management expertise to watershed planning and other water management planning and policy development.                                                                                                                              | ONGOING               |                     |                      |
| 8. Participate on inter-agency working committees intended to address fisheries issues related to hydro-development operations.                                                                                                                                              | ONGOING               |                     |                      |
| 9. Partner with other agencies to develop indicators of aquatic animal health and function.                                                                                                                                                                                  | ONGOING               |                     |                      |
| 10. Develop standards that guide developments affecting aquatic habitats for incorporation into the Saskatchewan Environmental Code.                                                                                                                                         | ✓                     |                     |                      |
| 11. Develop and implement a fisheries enhancement plan in partnership with resource users, which provides direction for the future, identifies priorities, explores options to increase revenues and contains a process for monitoring and evaluating program effectiveness. |                       | ✓                   |                      |
| 12. Implement regular and ongoing program evaluation of the FWDF. Criteria to be considered in the evaluation will include: benefits to the resource; benefits to the users; cost effectiveness; and safety considerations.                                                  |                       | ✓                   |                      |
| 13. Review, evaluate and adapt fisheries productivity models for use in Saskatchewan.                                                                                                                                                                                        |                       | ✓                   |                      |
| 14. Develop standard procedures for prioritizing fisheries field assessments based on the importance of the fishery and sustainability issues.                                                                                                                               | ✓                     |                     |                      |
| 15. Review and refine standardized, science-based protocols for field data collection and reporting.                                                                                                                                                                         | ✓                     |                     |                      |
| 16. Monitor and watch for shifts in species abundance.                                                                                                                                                                                                                       | ONGOING               |                     |                      |
| 17. Define population management objectives and develop specific targets and actions for individual waters, in consultation with users.                                                                                                                                      | ONGOING               |                     |                      |
| 18. Conduct a provincial angler survey every five years as part of the cross-Canada angler survey.                                                                                                                                                                           | ✓                     |                     | ✓                    |
| 19. Investigate potential use of a web-based angler diary with incentives to promote angler participation and develop if shown to be cost-effective.                                                                                                                         |                       | ✓                   |                      |
| 20. Implement mandatory reporting of angler harvest and use by outfitters.                                                                                                                                                                                                   | ✓                     |                     |                      |
| 21. Establish a web-based system to collect outfitter harvest information.                                                                                                                                                                                                   |                       | ✓                   |                      |
| 22. Modify the commercial fishing information system to make data collection, entry, retrieval and analysis easier.                                                                                                                                                          | ✓                     |                     |                      |
| 23. Improve data collection and tracking of the bait fishery and the commercial harvest of aquatic invertebrates.                                                                                                                                                            |                       | ✓                   |                      |
| 24. Partner with First Nations and Métis to obtain up-to-date information on the Aboriginal sustenance harvest.                                                                                                                                                              | ONGOING               |                     |                      |
| 25. Implement additional harvest controls for the sport fishery to alleviate specific harvest pressures across the province.                                                                                                                                                 | ✓                     |                     |                      |

|                                                                                                                                                                                    |   |         |   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---------|---|
| 26. Review the current three management zone structure to determine its effectiveness and whether changes are necessary.                                                           |   | ✓       |   |
| 27. Make informational materials available to the public on the role, use and limitations of fish stocking for fisheries management.                                               | ✓ |         |   |
| 28. Review and update the provincial stocking policy to ensure the stocking program continues to meet current and future fisheries management objectives.                          | ✓ |         |   |
| 29. Amend legislation to include mandatory suspensions of fishing privileges for certain conservation infractions.                                                                 |   | ✓       |   |
| 30. Provide adequate resources to ensure risk-based planning and compliance efforts focus on the greatest threats to the fishery.                                                  |   | ONGOING |   |
| 31. Review and rationalize special regulations to facilitate compliance while ensuring sustainable use.                                                                            | ✓ |         |   |
| 32. Collect up-to-date information about the effects of cottage development on fish harvest. This information will be used to help guide future recreational development on lakes. | ✓ |         |   |
| 33. Partner with First Nations and Métis people to improve information on sustenance harvest and use.                                                                              |   | ONGOING |   |
| 34. Work with local First Nations and Métis communities to use traditional ecological knowledge wherever possible in a manner that is respectful to the community.                 |   | ONGOING |   |
| 35. Promote and establish collaborative partnerships and fisheries projects.                                                                                                       |   | ONGOING |   |
| 36. Work with First Nations and Métis in support of their initiatives to conserve the fishery resource.                                                                            |   | ONGOING |   |
| 37. Work with First Nations and Métis committees established to address fisheries management issues.                                                                               |   | ONGOING |   |
| 38. Develop a communications strategy with First Nations and Métis to facilitate regular two-way sharing of information on the provincial fishery.                                 |   | ✓       |   |
| 39. Develop an angling licence structure with options based upon the opportunity to fish.                                                                                          | ✓ |         |   |
| 40. Develop an automated licensing system to provide greater convenience to the angling public.                                                                                    | ✓ |         |   |
| 41. Maintain the provincial Fisheries Advisory Committee to deal with matters of provincial scope.                                                                                 |   | ONGOING |   |
| 42. Develop a policy to address underutilized allocations.                                                                                                                         |   | ✓       |   |
| 43. Create detailed standards and best practices for competitive fishing event organizers to minimize event impacts on the fishery.                                                | ✓ |         |   |
| 44. Create and implement a public information program on fisheries management using a variety of communications media.                                                             |   | ✓       |   |
| 45. Develop an education and awareness program for aquatic invasive species and disease.                                                                                           |   | ✓       |   |
| 46. Collaborate with resource user groups to develop awareness and education programs aimed at promoting resource stewardship within the fisheries sector.                         |   | ONGOING |   |
| 47. Provide opportunities for public participation in hands-on fisheries management activities.                                                                                    |   | ONGOING |   |
| 48. Conduct a review of consultation processes used by other agencies to expand upon the consultation options available for fisheries management purposes.                         |   |         | ✓ |
| 49. Conduct a review of conflict resolution processes used by other agencies to expand upon the options available for fisheries management purposes.                               |   |         | ✓ |
| 50. Prepare annual progress reports on plan implementation.                                                                                                                        | ✓ |         |   |
| 51. Review and evaluate plan effectiveness every five years through a "State of the Fishery" reporting process.                                                                    |   |         | ✓ |

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# Glossary

**adaptive management:** a process for continually improving management policies and practices by learning from their outcomes. It involves feedback (monitoring and evaluation) and adjustment (plans and actions).

**allocation:** distribution of the opportunity to use the fishery resource among user groups.

**aquaculture:** the farming of aquatic organisms and plants.

**biological diversity (or biodiversity):** the total richness of biological variation, including variety of genes, species and ecosystems.

**biotic:** relating to living organisms.

**commercial net fishery:** the harvest of fish from waters with the purpose of marketing them.

**commercial users:** people involved in the commercial net fishery or the outfitting industry in Saskatchewan.

**conservation:** planned use and management of a natural resource to prevent depletion or exploitation.

**ecosystem:** a functional unit of any size (bog, pond, lake, watershed) that consists of one or more communities of organisms and their interactions among themselves and their environment.

**fishery:** a system that includes target organisms, the habitat in which they exist, the community of species in which the target organisms live, and the humans who exploit or affect the target species.

**habitat:** the physical, chemical and biological features of the environment where an organism lives.

**harvest:** captured and removed from the water for sustenance, recreational or commercial purposes.

**healthy ecosystem:** an ecosystem that is capable of maintaining its organizational structure (biodiversity), its resilience or capacity to rebound from disturbance, and its productivity.

**hydrological:** related to the study of the distribution, movement and properties of water in the Earth's atmosphere, on its surface and in its near-surface crust.

**limnological:** an examination of the physical and biotic properties among different lake, reservoir and river ecosystems.

**natural recruitment:** the rate at which new individuals enter a population of organisms without any human intervention, such as stocking.

**outfitting:** providing or organizing any combination of equipment, accommodation and guiding services, for clients, in connection with angling.

**productive capacity:** the maximum number, or weight, of living organisms a habitat can produce per unit of time.

**put and take fishery:** a fishery where catchable sized fish are stocked on a regular basis for people to harvest.

**recreational fishery:** harvesting fish for personal use, fun and challenge.

**sustainable harvest:** level of harvest within an ecosystem's natural ability to recover and regenerate.

**watershed:** the total expanse of terrain from which water flows into a waterbody or stream.





